Section – B

(Short Answers)

Note: Answer any EIGHT of the following questions. Each question carries 05 marks.

Q.2 What is the significant work of Dr. Abdul Qadeer Khan in the field of nuclear science?

Q.3 The radius of Hydrogen atom is 0.53×10^{-10} m convert it in cm, mm, nm.

Q.4 How can we determine the mass of Earth?

Q.5 What is atmospheric pressure? How will you measure it?

Q.6 What do you mean by anomalous behavior / expansion of water? How does it help the aquatic animals to save their lives in frozen seas?

Q.7 Define reflection of light. State the laws of reflection?

Q.8 State coulomb's law and define the unit of charge.

Q.9 A body of mass 50 Kg is moving with an acceleration of 5 ms^{-2}. Find the force acting on the body.

Q.10 What is Energy? How many forms of energy?

Q.11 Differentiate between concave mirror and convex mirror.

Q.12 Derive the equation: $S = v_i t + \frac{1}{2} a t^2$

Q.13 What is meant by dispersion of light?

Section – C

(Descriptive Answers)

Note: Answer any TWO of the following questions. Each question carries 14 (7 + 7) marks.

Q.14 (a) Explain how the value of "g" decreases with a change in altitude.

(b) Determine the acceleration of a car of mass 900 Kg, when a net force of 2700 N acts on it.

Q.15 (a) Define Momentum. Explain the law of conservation of momentum with the help of example.

(b) What is the power of an engine that pulls a 1000 Kg automobile at a steady speed of 10 m/sec along a level road?

Q.16 Write notes on any TWO of the following.

Ohm's Law Thermal Expansion States of Equilibrium